

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

EMSAT ADVANCED GEO-LOCATION	§	
TECHNOLOGY, LLC, and LOCATION	§	
BASED SERVICES LLC,	§	C.A. No. 2:08-cv-381
Plaintiffs,	§	
v.	§	JURY TRIAL DEMANDED
METROPCS COMMUNICATIONS, INC.,	§	
METROPCS WIRELESS, INC.,	§	
CENTENNIAL COMMUNICATIONS	§	
CORP., LEAP WIRELESS	§	
INTERNATIONAL, INC., CRICKET	§	
COMMUNICATIONS, INC., ETEX	§	
TELEPHONE COOPERATIVE INC., and	§	
ETEX COMMUNICATIONS, L.P.,	§	
Defendants.	§	
	§	
	§	
	§	

**JOINT RESPONSIVE BRIEF OF DEFENDANTS METROPCS COMMUNICATIONS,
INC., METROPCS WIRELESS, INC., AND CENTENNIAL COMMUNICATIONS
CORP. IN SUPPORT OF THEIR PROPOSED CLAIM CONSTRUCTIONS**

TABLE OF CONTENTS

TABLE OF EXHIBITS	iii
I. INTRODUCTION	1
II. BACKGROUND	2
III. DEFENDANTS’ APPROACH IS CONSISTENT WITH THE LAW	5
IV. DISPUTED TERMS FOR CONSTRUCTION	6
A. “EXACT GEOGRAPHIC LOCATION”	6
1. The Term “Exact Geographic Location” Is Insolubly Ambiguous	7
2. Plaintiffs Disclaimed Certain Positioning Technologies During Prosecution	10
3. Plaintiffs’ Construction Is Itself Indefinite and Must Be Rejected	14
B. “DETERMINING THE EXACT GEOGRAPHIC LOCATION OF THE MOBILE UNIT,” “POSITIONING SYSTEM OBTAINING A POSITION,” AND “POSITIONAL DATA”	15
C. “SERVICE PROVIDER”	20
D. “OVERRIDE CRITERIA”	24
1. Override Criteria Must Be Based on the Exact Geographic Location	24
2. “Criteria” Is the Plural Form of “Criterion”	26
E. “SUBSEQUENT SERVICES”	28
1. In View of the Different Standards, the Court Should Not Give any Weight to the Examiner’s Statements During Reexamination.....	29
2. Defendants’ Construction Is the Only Interpretation Fully Supported by the Specification	31
3. Patent Applicants Are Forbidden from Defining Claims through Prosecution History Alone	33
F. “LOCATION-BASED SERVICE”	34
1. Defendants’ Construction is Consistent with the Intrinsic Evidence	35
2. Plaintiffs’ Construction Improperly Broadens the Scope of the Claims Beyond the Applicants’ Invention	36
G. “TRIANGULATION”	37
1. The Number of “Known Locations” Required to Calculate a Location Varies between Different Positioning Systems	37
2. Plaintiffs’ Construction Is Internally Inconsistent.....	38
3. The ‘763 Patent Distinguishes between LORAN and Triangulation	38
4. Triangulation Requires Angle Determinations.....	39

5. Plaintiffs Improperly Rely on a General-Usage Dictionary that Contradicts Art-Specific Evidence	39
V. CONCLUSION	40

TABLE OF EXHIBITS

Exhibit 1	U.S. Patent No. 5,946,611 (the “’611 Patent”)
Exhibit 2	U.S. Patent No. 6,324,404 (the “’404 Patent”)
Exhibit 3	U.S. Patent No. 6,847,822 (the “’822 Patent”)
Exhibit 4	U.S. Patent No. 7,289,763 (the “’763 Patent”)
Exhibit 5	U.S. Patent No. 5,235,633 (the “’633 Patent”)
Exhibit 6	U.S. Patent No. 5,054,110 (“Comroe”)
Exhibit 7	U.S. Patent No. 4,229,620 (“Schaible”)
Exhibit 8	U.S. Patent Application Serial No. 07/813,494 (the “1991 Application”)
Exhibit 9	October 8, 1992 Amendment to the 1991 Application (the “Oct. 8, 1992 Amendment”)
Exhibit 10	July 9, 1992 Office Action of the 1991 Application the (the “July 9, 1992 Office Action”)
Exhibit 11	August 18, 1999 Amendment
Exhibit 12	March 21, 1996 Information Disclosure Statement
Exhibit 13	March 16, 2010 Office Action during Reexamination of the ’822 Patent (the “March 16, 2010 Reexamination Office Action”)
Exhibit 14	Plaintiffs’ Preliminary Claim Construction Statement
Exhibit 15	Plaintiffs’ Amended Response to Defendants’ Interrogatory No. 1
Exhibit 16	Plaintiffs’ Opening Claim Construction Brief, <i>EMSAT Advanced Geo-Location Technology, LLC v. Cellco Partnership</i> , Case No. 4:08-CV-816 (N.D. Ohio) (D.I. 34)
Exhibit 17	Plaintiffs’ Responsive Claim Construction Brief, <i>EMSAT Advanced Geo-Location Technology, LLC v. Cellco Partnership</i> , Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42)
Exhibit 18	Emsat Advanced Geo-Location Technology, LLC’s Responses to T-Mobile USA, Inc.’s First Set of Interrogatories
Exhibit 19	Plaintiffs’ Complaint, <i>EMSAT Advanced Geo-Location Tech., LLC, et al. v. AT&T Mobility LLC, et al.</i> , No. 4:08-CV-822 (N.D. Oh. 2008) (D.I. 1)

- Exhibit 20 Technology Summary Chart
- Exhibit 21 THE AMERICAN HERITAGE DICTIONARY (2d. College ed. 1985)
- Exhibit 22 WEBSTER'S II NEW RIVERSIDE UNIVERSITY DICTIONARY (1994)
- Exhibit 23 <http://www.merriam-webster.com/dictionary/triangulation>
- Exhibit 24 LORAN-C User Handbook, Department of Transportation, May 1980
- Exhibit 25 NAVIGATION DICTIONARY, H.O. Pub. No. 220 (U.S. Naval Oceanographic Office, Second Ed. 1969)
- Exhibit 26 1987 NORTON ENCYCLOPEDIC DICTIONARY OF NAVIGATION
- Exhibit 27 C. Belove, *Handbook of Modern Electronics and Electrical Engineering*, Ch. 52, (John Wiley & Sons) (1986)
- Exhibit 28 Bey et al., *The Unreasonableness of the Patent Office's Broadest Reasonable Interpretation Standard*, 37 AIPLA Q.J. 285, 288 (2009)
- Exhibit 29 N. Bowditch, *American Practical Navigator, Volume I*, (Defense Mapping Agency Hydrographic Center) (1977)
- Exhibit 30 P.K. Enge and K.E. Olson, *Medium Frequency Broadcast of Differential GPS Data*, 26 IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS 607 (1990)
- Exhibit 31 H. Eriksson and R. Bownds, "Performance of Dynamic Channel Allocation in the DECT System," IEEE 41st Vehicular Technology Conference, 1991
- Exhibit 32 R.L. French and G. M. Lang, *Automatic Route Control System*, Vol. VT-21, No. 2 IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, (May 1973)
- Exhibit 33 F. Iwaki, et al., "Recognition of Vehicle's Location for Navigation," IEEE Vehicle Navigation and Information Systems Conference, 1989
- Exhibit 34 E. Kaplan, *Understanding GPS: Principles and Applications* (Artech House) (1996)
- Exhibit 35 S.H. Laurila, *Electronic Surveying and Navigation* (John Wiley & Sons) (1976)
- Exhibit 36 C.D. McGillem, et. al., *Experimentally determined accuracy and Stability of Loran C Signals for Land Vehicle Location* 31 IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY 15 (1982)
- Exhibit 37 M. Mouly and M. Pautet, *The GSM System for Mobile Communications*, 1992

- Exhibit 38 H. Song, "Automatic Vehicle Location in Cellular Communications Systems," IEEE Transactions on Vehicular Technology, Nov. 1994
- Exhibit 39 W. Sternberger and L. Le Blanc, Short Range Precision Navigation, MTS-IEEE, Oceans '76, at 5E-1 (1976)
- Exhibit 40 W. T. Warren, et al., "Vehicle Location System Experiment," IEEE Transactions On Vehicular Technology, vol. VT-21, no. 3, Aug. 1972
- Exhibit 41 May 16, 2007 Amendment to the '763 Patent application
- Exhibit 42 LORAN-C User Handbook, Department of Transportation
- Exhibit 43 Nov. 3, 1992 Notice of Allowance, '633 Patent application
- Exhibit 44 Information Disclosure Statement, Reissue 35,916 Application

I. INTRODUCTION

At every turn, Plaintiffs ask this Court to endorse expansive constructions of the disputed claim terms that divorce the claim language from the specification, ignoring the context in which the asserted patents were allowed. Plaintiffs admit that when they filed their first patent application in 1991, the “cellular telephone business was vastly different than today.” Plaintiffs’ broad constructions are an obvious attempt to expand the scope of their claims to cover material beyond what the applicants contemplated at the time of filing their first patent application in 1991 (“the 1991 Application”).

Plaintiffs note that the 1991 Application is directed to solving a “false roaming problem” that occurred when a geographical barrier prevented the telephone tower closest to a cellular subscriber from picking up the subscriber’s call, resulting in excess roaming fees being incurred. The 1991 Application was used as a springboard for all four asserted patents, which differ significantly in scope from the 1991 Application, but which all claim priority to this application. The 1991 Application purported to solve the false roaming problem by using the geographic location of the mobile unit, rather than the strongest signal between the cellular telephone and the tower, to make call management decisions such as billing and taxing. After the 1991 Application issued as a patent, however, but before any of the four asserted patents were filed, the cellular telephone business experienced rapid and significant changes, including a 1996 mandate by the Federal Communications Commission (“FCC”) requiring that all cellular phones be able to report accurate location information to 9-1-1 call centers, as well as various commercial applications that developed using the technology required to satisfy the FCC mandate. Seeking to profit from this government requirement and the technology that the wireless carriers developed in anticipation of it, Plaintiffs filed claims at the PTO nine days after

the FCC mandate issued in an attempt to capture a technology that Plaintiffs clearly did not invent, while still claiming priority to the 1991 filing of an application directed to *false roaming*.

Consistent with their scheme to obtain these patent claims, Plaintiffs have proposed overly broad claim constructions in a transparent attempt to capture later-developed technology that goes far beyond what the specification of the 1991 Application disclosed or anticipated. For example, Plaintiffs propose that this Court construe the term “exact geographic location” to cover any type of positioning system. In the same vein, Plaintiffs seek constructions for “service provider” and “location-based service” that include any type of provider or service, even though the specification is clearly directed to wireless services and wireless service providers.

Defendants’ proposed constructions, on the other hand, accurately reflect how the claim language would have been understood by one skilled in the art in the context of the specification and other reliable evidence. Defendants’ proposed constructions reflect constructions consistent with the scope, purpose, and description of the invention and most naturally align with the intrinsic evidence and should therefore be adopted by the Court.

II. BACKGROUND

Plaintiffs accuse Defendants of infringing four patents – U.S. Patent Nos. 5,946,611 (the “’611 Patent”); 6,324,404 (the “’404 Patent”); 6,847,822 (the “’822 Patent”); and 7,289,763 (the “’763 Patent”) (collectively, the “Asserted Patents”). The applications that issued as the Asserted Patents were filed during the period from 1996 to 2004, but they all claim priority to a “parent” application filed in 1991 (the “1991 Application”), which issued in 1993 as U.S. Patent No. 5,235,633 (“the ’633 Patent”).

The Asserted Patents all relate to determining the “exact geographic location” of a cell phone and using that location information to make decisions about the operation of a wireless

network, such as which wireless carrier and/or cell site¹ should handle a call made to or from a cell phone.

As Plaintiffs describe in their opening claim construction brief and as described in the background of the invention, the system claimed in the '633 patent was developed to solve a "false roaming" problem that existed at the time when a mobile unit relied on locking into a cell site from another carrier which at that point was emitting the strongest signal. False roaming occurred when a subscriber's cell phone connected to a cell site operated by another carrier that was located further away from the caller, but whose signal was stronger at the caller's location. If that cell site was operated by an adjacent carrier, the subscriber was not considered in the "home" coverage area for purposes of the call, but rather the call was considered to be in a "visited" or "roaming" coverage area and roaming charges from the other carrier would be assessed to the subscriber's carrier. (*See* Ex. 5, '633 Patent, 2:55-67).

This alleged problem is illustrated in Figure 5A of the '404 Patent, reproduced below, for example. The figure shows communication devices CD1, CD2, and CD3 physically located in the service territory of one service provider, but incorrectly – according to the Asserted Patents (*See, e.g.,* Ex. 2, '404 Patent, 5:11-13) – using network equipment belonging to a different service provider:

¹ A "cell site" is a subarea of a wireless communications system serviced by a transmitter and receiver and carries signals to and from a mobile unit in its range.

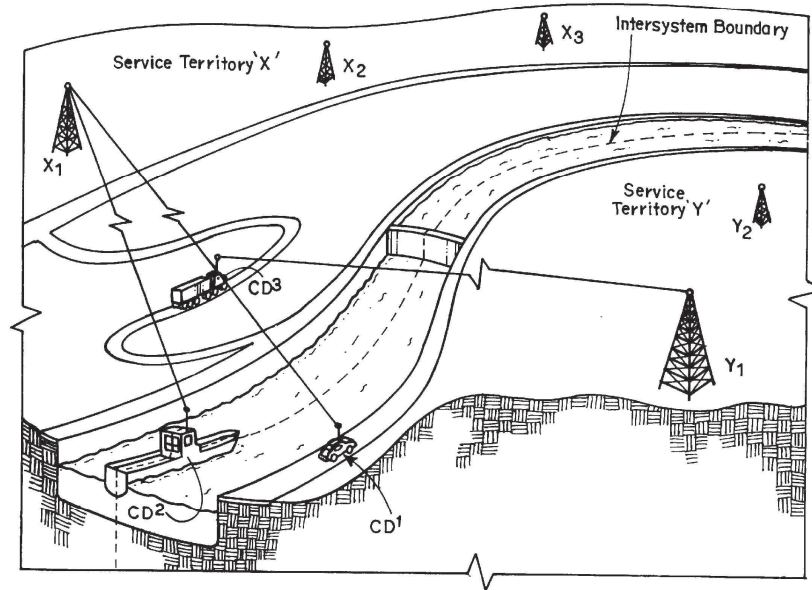


FIG. 5A.

(Ex. 2, '404 Patent).

Plaintiffs recently characterized determining and using the “exact geographic location” of a cell phone as being central to the patent applicants’ alleged “solution” to the problem of connection to the incorrect service provider’s network:

[The] solution involved combining certain features of the cellular system with location-finding technology to create a location-aware network that could determine the *exact geographic location* of the telephone and, in turn, use that information to improve the operation of the cellular telephone network by, for example, avoiding the generation of false roaming charges. . . .

(See Ex. 19, Compl. at ¶ 11, *EMSAT Advanced Geo-Location Tech., LLC, et al. v. AT&T Mobility LLC, et al.*, No. 4:08-CV-822, D.I. 1 (N.D. Oh. 2008) (emphasis added)).

This key concept of an “exact geographic location” being used to improve the provision of wireless communications service by a wireless carrier is reiterated throughout the Asserted Patents and is a central feature of all of the asserted claims. However, as Defendants explain in their concurrently-filed Motion for Partial Summary Judgment, the term “exact geographic

location” recited in the claims defies any attempt at meaningful definition, and renders the claims insolubly ambiguous and therefore invalid.

III. DEFENDANTS’ APPROACH IS CONSISTENT WITH THE LAW

Nine terms must be construed in order to resolve the parties’ current disputes as to the scope of the asserted claims.

Defendants’ constructions are consistent with – and indeed compelled by – the claims themselves, the descriptions in the patent specifications, and the statements that the applicants made in order to obtain the Asserted Patents. Plaintiffs, on the other hand, do not propose constructions for several of the disputed terms. As the scope of each of these terms is relevant to Plaintiffs’ infringement contentions and is in dispute, however, the Court should construe these terms. The Federal Circuit explained that “[a] determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate . . . when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008). Such is the case here. The ordinary meaning of the terms used in the Plaintiffs’ infringement contentions – and the unreasonable claim constructions upon which they are based – do not resolve the dispute and necessitate resolution of all of the disputed claim terms.

Regarding the few terms for which Plaintiffs propose any construction at all, their constructions are fundamentally flawed because: (1) they contradict the well-known meaning of terms of art in the field of the invention, (2) they are at odds with the patents specifications or statements made to the Patent Office by the patent applicants, or (3) they merely substitute one indefinite term for another. Plaintiffs disregard the intrinsic evidence, including the full specifications of the Asserted Patents, choosing instead either to rely only on the specification of

unasserted U.S. Patent No. 5,325,633 (the “633 Patent”), notwithstanding contrary statements in the Asserted Patents themselves,² or to ignore the specifications altogether³ and focus on unreliable extrinsic evidence.⁴

IV. DISPUTED TERMS FOR CONSTRUCTION

A. “Exact Geographic Location”

Claim Term	Defendants’ Construction	Plaintiffs’ Construction
exact geographic location (’611 Patent, claims 1, 5; ’404 Patent, claim 9; ’822 Patent, claims 21, 34, 37; ’763 Patent, claim 23)	Indefinite <u>Alternatively, MetroPCS’s Proposed Construction:</u> a position in latitude and longitude that has a degree of preciseness greater than that derived from cell site location (<i>i.e.</i> , measurements related to cell site id, cell sector or signal strength) <u>Alternatively, Centennial’s Construction:</u> a precise and accurate position in latitude and longitude that is not determined using cell site location, cell site ID, coverage area, signal strength, two-way ranging, or hyperbolic ranging	A position in longitude and latitude having a degree of accuracy and precision typical of that obtained from a Global Positioning System (GPS), LORAN, or other position determining system.

The parties disagree about whether the phrase “exact geographic location” satisfies the definiteness requirement set forth in the second paragraph of 35 U.S.C. § 112. Patent applicants

² See portions of Plaintiffs’ Opening Brief related to “exact geographic location,” “location-based services,” and “triangulation.” (D.I. 130 at 7-12 and 16-19).

³ See portions of Plaintiffs’ Opening Brief related to “override criteria.” (*Id.* at 19-21).

⁴ Plaintiffs improperly rely upon four separate dictionaries, spanning a 28-year period, to define two disputed terms – “override criteria” and “triangulation.” (*See id.* at 18-21). The Federal Circuit has explicitly rejected Plaintiffs’ approach to claim construction (*i.e.*, cherry-picking dictionary definitions and ignoring the specifications of the Asserted Patents) because it may “systematically cause the construction of the claim[s] to be unduly expansive,” and hence improper. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005).

set forth no objective standard from which the public can ascertain whether a determination of geographic location is sufficiently exact to fall within the scope of the term “exact geographic location,” rendering the term incapable of construction. *See Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005). Does “exact geographic location” mean within one meter, 100 meters, or 300 meters? Instead of specificity, Plaintiffs offer an open-ended construction that would not provide any guidance to the jury regarding the scope of the claims and that fails to acknowledge statements the patent applicants themselves made in the Asserted Patents as well as to the Patent Office. The only clarity offered by the intrinsic record is by way of exclusion; namely, that certain technologies fall outside the scope of “exact geographic location” because the applicants disclaimed them. But such exclusions do not save this term from being insolubly ambiguous.

Concurrent with the filing of this claim construction brief, Defendants are filing a motion for summary judgment that all asserted claims are invalid because the term “exact geographic location” is indefinite. The standard for indefiniteness is set forth more fully in that motion.

1. The Term “Exact Geographic Location” Is Insolubly Ambiguous

Claim terms must be sufficiently precise to permit accurate determination of the metes and bounds of the patented subject matter. “Because claims delineate the patentee’s right to exclude, the patent statute requires that the scope of the claims be sufficiently definite to inform the public of the bounds of the protected invention, i.e., what subject matter is covered by the exclusive rights of the patent. Otherwise, competitors cannot avoid infringement, defeating the public notice function of patent claims.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). Where, as here, the specifications of the Asserted Patents fail to provide an “objective definition identifying a standard for [which a claim limitation] is satisfied,” the patent claims are invalid for indefiniteness. *Datamize*, 417 F.3d at 1350.

The claim language and specifications of the Asserted Patents provide no guidance as to how one would determine whether the limitation “exact geographic location” is satisfied. On its face, the term requires strict and complete mathematical accuracy (*i.e.*, the location must be exact). (*See* Ex. 21, AMERICAN HERITAGE DICTIONARY, at 471 (2d College ed. 1985)). Notwithstanding the ordinary meaning of the term “exact,” however, the parties agree that a person of skill in the art would understand that any position determining system would necessarily have some level of inaccuracy. (*See, e.g.*, D.I. 130 at 9). But the claim language does not suggest *how* exact a geographic location must be in order to fall within the scope of the term “exact geographic location.” At best, the claims merely identify, for example, that the location determinations *may* be made using a satellite (*see, e.g.*, Ex. 2, ’404 Patent, Claims 6, 15, 18, and 25), or using “over-the-air communications” (*see, e.g.*, Ex. 1, ’611 Patent, Claim 2). On the other hand, the claims do make clear that an “exact geographic location” *cannot* be based on cell site location (*see, e.g.*, Ex. 2, ’404 Patent, Claim 1, “based on said exact geographic location of the mobile unit and regardless of which cell site handled the communication”).

The specifications of the Asserted Patents provide no further guidance. The statement Plaintiffs rely upon for their construction, made in the 1991 Application, does not render the term definite: “The exact location of each mobile unit is determined using a Global Positioning System (GPS), LORAN, or other position determining system.” First, because GPS and LORAN are positioning systems with vastly different ranges of accuracy, the specifications’ reference to these systems fails to provide any benchmark as to how exact the geographic location must be.⁵ Further, even within these technologies, accuracy has varied. For example, in

⁵ (*See e.g.*, Ex. 30, P.K. Enge & K.E. Olson, *Medium Frequency Broadcast of Differential GPS Data*, 26 IEEE Transactions on Aerospace and Electronic Systems 607 (1990); Ex. 28, C. Belove, *Handbook of Modern Electronics and Electrical Engineering*, Ch. 52 (John Wiley & Sons 1986); Ex. 32, R.L. French & G. M. Lang, *Automatic Route Control System*, VT-21, No. 2 IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY (May 1973); Ex. 35, C.D.

the 1990s commercial GPS was accurate only between 10 and 100 meters. Today, GPS is still only accurate between 3 and 15 meters. Moreover, the definiteness requirement is not satisfied where patentees identify one or more embodiments, but do not identify an “objective standard” for infringement. *See Datamize*, 417 F.3d at 1352; *Halliburton*, 514 F.3d at 1250. Where, as here, the disclosure of working examples does not provide any guidance as to the outer boundaries of the claim, the claims remain indefinite. *Miles Labs. Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993) (“[t]he invention’s operability may say nothing about a skilled artisan’s understanding of the bounds of the claim.”). Second, the specifications’ broad statement that “other position determining systems” may be used to determine the exact geographic location of the mobile unit do not provide any scope or basis for determining how accurate or precise the location must be. *See Datamize*, 417 F.3d at 1350 (“When a word of degree is used the district court must determine whether the patent’s specification provides some standard for measuring that degree.”) (citation omitted). In fact, nowhere do the specifications explain the scope or meaning of “exact geographic location.” Indeed, the disclosure that other position determining systems could be used further demonstrates the need for definiteness. Would a technology that only was accurate to 100 meters be sufficient?

The specifications of the Asserted Patents, when viewed in the context of the full intrinsic record, are also rife with contradictions that preclude any meaningful construction of the term “exact geographic location.” For example, at the time that they amended the claims in the 1991 Application to include the word “exact,” the applicants argued that *systems using signal strength for location determinations were not exact*. (See Ex. 9, Oct. 8, 1992, Amendment at 6). Four years after making those arguments, however, the applicants stated in the 1996 Application that

McGillem et. al., *Experimentally determined accuracy and Stability of Loran C Signals for Land Vehicle Location*, 31 IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY 15 (1982)).

*signal strength is a method for determining an exact geographic location.*⁶ (See, e.g., Ex. 2, '404 Patent, at 11:20-25). Moreover, despite arguing in another litigation that using signal strength is “*extremely inexact*” (see Ex. 17, Pl’s Responsive Claim Construction Br., 4:08-cv-816, D.I. 42, at 35), Plaintiffs now **oppose** Defendants’ construction, which *excludes* signal strength as a method of determining exact geographic location. The inherent ambiguity in the patent applicants’ chosen claim language and the irreconcilable contradictions in the intrinsic record render the term “exact geographic location” indefinite.

Finally, the prosecution history does not inform the skilled reader how exact the geographic location must be. During the prosecution of the '633 Patent, the patent applicants switched from claiming a “geographic location” to claiming an “**exact** geographic location” to distinguish the claims from invalidating prior art references cited by the Patent Office. (Ex. 9, Oct. 8, 1992 Amendment, at 2-3). By making this change, the applicants narrowed the scope of the invention to “exact” geographic location determinations but provided no objective standard from which to ascertain how accurately and precisely (*i.e.*, exactly) a geographic location must be determined for it to fall within the scope of the term “exact geographic location.” See *Datamize*, 417 F.3d at 1350. Hence, the term “exact geographic location” provides no objective standard from which the public may understand the scope of the term, rendering the term insolubly ambiguous and hence indefinite.

2. Plaintiffs Disclaimed Certain Positioning Technologies During Prosecution

If the Court does not hold the term “exact geographic location” indefinite, the Court should at least make clear that certain inexact positioning systems were disclaimed from the

⁶ These diametrically opposed statements were made notwithstanding Plaintiffs’ position that the subject matter disclosed in the 1991 Application and all of the Asserted Patents is identical. (See Ex. 18, Emsat Advanced Geo-Location Tech., LLC’s Resps. to T-Mobile USA, Inc.’s First Set of Interrogs., at 5, asserting a reduction to practice for all of the Asserted Claims as of the filing date of the 1991 Application).

scope of the patent during prosecution of the 1991 Application and thus cannot be included within the scope of the term “exact geographic location.” *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 33 (1966) (“Claims as allowed must be read and interpreted with reference to rejected ones and to the state of the prior art; and claims that have been narrowed in order to obtain the issuance of a patent by distinguishing the prior art cannot be sustained to cover that which was previously by limitation eliminated from the patent.”); *see also Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1306 (Fed. Cir. 2007).

The patent applicants’ disclaimer during the prosecution of the 1991 Application was clear, unambiguous, and unmistakable. The original claims filed in the 1991 Application used the phrase “geographic location” and were rejected by the Patent Office as being unpatentable in view of several prior art patents, including U.S. Patent No. 5,054,110 to Comroe (“*Comroe*”) and U.S. Patent No. 4,229,620 to Schaible (“*Schaible*”). The patent applicants then modified the term to “*exact* geographic location” in order to distinguish the prior art. (Ex. 9, October 8, 1992 Amendment, at 2-3).

Comroe describes the use of cell site ID or coverage area to locate a mobile unit. (*See* Ex. 6, *Comroe*, e.g., Abstract, 2:15-37). *Schaible* describes the use of a propagation ranging technique known as “two-way ranging” to assist with call management and handoffs in a wireless network. (*See* Ex. 7, *Schaible*, e.g., Abstract,; 1:39-46, 2:20-24, 4:12-23, 7:37-46, 10:64-68). *Schaible* also discloses other types of propagation ranging techniques, including hyperbolic ranging. (*Id.* at 2:30-41). In addition, *Schaible* discusses using signal level determination as an indication of mobile unit location. *Id.* at 1:39-46; *see also id.* at 10:55-68.

In response to the Patent Office’s rejection of the claims, the applicants amended the claims by, among other things, adding the word “exact” before each occurrence of the term

“geographic location.” (See Ex. 9, October 8, 1992 Amendment, at 1-3). The applicants then distinguished the amended claims from *Schaible*, telling the Patent Office:

[T]he Schaible patent is cited as teaching a mobile radiotelephone station two-way ranging system that includes a switching office. This patent is cited as teaching the desirability of maintaining some indication of the location of the mobile unit for hand-offs. However, applicants are not claiming as the invention the concept of knowing where a mobile unit is per se, but are claiming a means and a method that has a data storage means in an MTSO that matches the exact geographic location of a mobile unit to a cell site. The Schaible patent expressly states, in column 10, lines 55 et seq., that mobile unit location is determined using **SIGNAL STRENGTH**. Still further, this patent uses signal strength as an indication of location. Therefore, this patent merely discloses what applicants already know is old, and which has the problems that applicants’ invention overcomes.

(*Id.* at 6, emphasis in original). The applicants disclaimed the technologies disclosed in *Schaible* as inexact, stating:

There is no disclosure in this [*Schaible*] patent of the means and/or method of matching *exact geographic location* of a mobile unit to stored cell site geographic locations to make call management decisions.

(*Id.*, *emphasis added*). Similarly, to distinguish the claims from *Comroe*, the applicants stated:

The mobile unit [in *Comroe*] never indicates what its exact geographic location is, only that it is near a particular cell site (see column 4, lines 13-15 in which it is stated that “The third data element holds the ID of the cell in which the communications unit has last registered its presence. . .”).

(*Id.* at 8). They also stated:

As specifically discussed in the specification, see, e.g., inter alia, page 3, line 15, et. seq., the geographic location of a mobile unit within a cellular network affects the quality and strength of the signals associated with that mobile unit. Any network that bases service on signal strength may be quite inefficient and may experience service problems. Still further, billing using such mobile unit locating methods may not be efficient and may even result in loss of income to the cellular network.”

(*Id.* at 4-5). Based on these statements to the Patent Office, the applicants disclaimed any geographic location determined using the techniques disclosed in *Schaible* and *Comroe*. See

Microsoft Corp. v. Multi-Tech Sys., 357 F.3d 1340, 1349 (Fed. Cir. 2004); *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989 (Fed. Cir. 2003).

Accordingly, even though the scope of the term “exact geographic location” cannot be determined, the Asserted Patents and the applicants’ statements to the Patent Office at least made clear that any geographic location determined using cell site ID, coverage area, signal strength, two-way ranging, and/or hyperbolic ranging has been disclaimed and must be excluded. *See N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335 (Fed. Cir. 2005) (affirming a negative construction supported by statements made by the applicants that disclaimed coverage). Thus, if this Court were to hold the claims not indefinite, it should adopt a construction that at least makes clear that the claims cannot include material which the applicants disclaimed during prosecution of the ’633 Patent. Accordingly, MetroPCS proposes that this Court construe the term to mean a position in latitude and longitude that has a degree of preciseness greater than that derived from cell site location (*i.e.*, measurements related to cell site id, cell sector or signal strength).⁷ Centennial proposes a similar construction: a precise and accurate position in latitude and longitude that is not determined using cell site location, cell site ID, coverage area, signal strength, two-way ranging, or hyperbolic ranging.⁸

Plaintiffs take issue with Centennial’s alternative construction because it includes the words “precise and accurate,” arguing that this “inject[s] a subjective element into the claims.” (D.I. 130 at 8). This objection is puzzling, particularly in light of the facts that *Plaintiffs’ own*

⁷ Determining location based on cell site can mean several different things, but essentially involves deriving the location of the mobile unit based on its proximity to a cell site, either using something called a cell ID, cell sectors, or the signal strength of the mobile unit between the mobile unit and different cells.

⁸ As is clear from the language of their proposed constructions, MetroPCS and Centennial agree that “exact geographic location” cannot include that material which applicants disclaimed during prosecution. Centennial articulates its construction as excluding those positioning technologies in the prior art and which the applicants disclaimed. MetroPCS articulates its construction in terms of degree – a location which must be more precise than those positioning systems applicants disclaimed.

construction includes the words “precision and accuracy,” and – as Plaintiffs themselves point out in their brief – the ’633 Patent itself uses *those very terms* to describe the types of geographic positions covered by the claims. (D.I. 130 at 7-8 (“[T]he exact position . . . can be determined with an extremely high degree of accuracy and precision” (quoting ’633 Patent at 3:57-61) (emphasis Plaintiffs’)); “All that is required is that the source of positional data be able to generate precise and accurate location data on a fixed or rapidly moving object.” (quoting ’633 Patent at 5:64-6:3) (emphasis Plaintiffs’))). Thus, when Plaintiffs question the meaning of those words (D.I. 130 at 8, “What is precise and accurate?”; “How precise and accurate does the position in latitude and longitude have to be?”), *the applicants admit their own inability* to determine the meaning of the words they used to describe their own alleged invention. If, as Plaintiffs argue, Centennial’s alternative construction of “exact geographic location” is unhelpful because it is not sufficiently objective, that is only because the Asserted Patents – a direct source of Centennial’s alternative construction – fail to provide a description from which to determine the required objective standard. In short, Centennial *agrees* with Plaintiffs that the words “precise and accurate” do not provide an objective standard, but those words are nevertheless the most specific information found in the Asserted Patents regarding the meaning of the term “exact geographic location.”

3. Plaintiffs’ Construction Is Itself Indefinite and Must Be Rejected

Plaintiffs’ construction acknowledges that, to determine the scope of the claims, an analysis of the “degree of accuracy” is required. However, Plaintiffs’ construction sets forth no objective standard by which the jury would be able to determine whether that required level of accuracy has been satisfied. *See Datamize*, 417 F.3d at 1350 (“Some objective standard must be provided in order to allow the public to determine the scope of the claimed invention.”). According to Plaintiffs’ construction, the claims would be infringed if a geographic location

were determined with “a degree of accuracy and precision typical of that obtained from a Global Positioning System (GPS), LORAN, or *other position determining system*.” (Ex. 14, Pls.’ Prelim. Claim Construction Statement (emphasis added)). Because accuracies can vary widely between position determining systems (and can even vary widely for the *same* system depending on configuration, weather conditions, terrain and time (*e.g.*, year of use)),⁹ there is no “typical” accuracy for GPS or LORAN, let alone for any unspecified “other” system. Plaintiffs’ construction is therefore ineffective for defining the scope of the claims and would provide no assistance to the jury. Moreover, Plaintiffs’ broadly worded construction would include those positioning systems that were expressly disclaimed during prosecution of the ’633 Patent, and is thus legally improper. In the absence of any objective standard by which to evaluate whether a geographic location is sufficiently accurate to be considered an “exact” geographic location, Plaintiffs’ construction must be rejected.¹⁰ *Datamize*, 417 F.3d at 1350.

B. “Determining the Exact Geographic Location of the Mobile Unit,” “Positioning System Obtaining a Position,” and “Positional Data”

Claim Term	MetroPCS’ Construction	Plaintiff’s Construction
(1) determining the exact geographic location of the mobile unit (’611 Patent, claim 1)	(1) calculating the exact geographic location of the mobile unit, wherein the mobile unit independently calculates its position using logic circuitry in the mobile unit	(1) No construction of this phrase is necessary apart from the construction of the constituent term, “exact geographic location.” (1), (2), (3) This phrase should otherwise be accorded its plain

⁹ (See Ex. 1, ’611 Patent, at 2:25-28 (“signal strength can be strongly affected by terrain, environmental conditions as well as interference from other sources”)).

¹⁰ Plaintiffs have argued that a geographic location is “exact” if it is simply expressed in the format of latitude and longitude. (D.I. 130 at 11 (“In other words, if Defendants’ networks employ a positioning [sic] determining system that renders the position of mobile units in latitude and longitude (such as GPS or LORAN), then their networks calculated “exact geographic location.”)). This position is not explicitly reflected in Plaintiffs’ proposed construction, but is improper for the obvious reason that it effectively reads the word “exact” out of the claims, inserting in its place a requirement that the location be *formatted* according to a certain standard. As the *format* of location information is wholly unrelated to the *accuracy* of that information, Plaintiffs’ approach should be rejected.

(2) positioning system obtaining a position ('822 Patent, claims 10, 34)	(2) system in which the logic circuitry in the mobile unit independently calculates a position of the mobile unit in longitude and latitude	and ordinary meaning, which is best recognized by the express words.
(3) positional data ('763 Patent, claims 23, 26, 28-32)	(3) position of the mobile unit in longitude and latitude calculated independently by logic circuitry in the mobile unit	

The parties disagree as to the scope of these position determining terms. By proposing no construction for these terms, Plaintiffs hope to recast their asserted patents to go well beyond GPS and LORAN, which in 1991 used the circuitry in the cell phone to calculate latitude and longitude, to cover the later-developed technology that Defendants use today, which relies on a separate component called a position determining entity to calculate the mobile unit's position. Plaintiffs' attempt to broaden the scope of the claims should be rejected as the specifications of the Asserted Patents only describe or anticipate that the position determination is accomplished in the cell phone.

The specifications of the Asserted Patents make clear that when the claims refer to "determining an exact geographic location," "obtaining a position. . . identifying an exact geographic location," and "positional data corresponding to an exact geographic location," the location or position determination occurs in the cell phone. The specifications of the Asserted Patents describe the operation of Global Positioning System ("GPS"):

The means for accurately determining the precise position of the mobile unit includes a Global Positioning System. The GPS includes satellites, such as satellite 22 in geostationary orbit about the earth. Each mobile unit further includes a GPS receiver 24 located between the duplexer and the logic circuitry of the mobile unit. The GPS receiver communicates with the satellite 22 and the exact longitude and latitude of the mobile unit are determined.

See Ex. 1, '611 Patent, 5:27-34; *see also* Ex. 5, '633 Patent, 5:27-34; Ex. 2, '404 Patent, 9:17-24; Ex. 3, '822 Patent; Ex. 4, '763 Patent, 9:24-31. As disclosed in the specifications of the Asserted Patents, the GPS receiver, located inside the cell phone, receives the signals transmitted by the satellite and converts these signals into longitude and latitude coordinates of the cell phone. Whether the cell phone receives signals from satellites (as is the case with GPS) or from land-based radio transmitters (as is the case with LORAN)¹¹, the calculation of the position of the mobile unit in longitude and latitude is performed in the cell phone. The specifications of the Asserted Patents suggest no other means for how the position in latitude and longitude may be calculated other than in the cell phone. Indeed, no other means existed when the 1991 Application was filed, to which all the Asserted Patents claim priority. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (“We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.”).

Consistent with the specifications of the Asserted Patents, the Examiner also understood that the cell phone autonomously calculates the position of the cell phone. (*See* Ex. 43, Nov. 3, 1992 Notice of Allowance at 3-4 (noting that the allowed claims include “A cellular communications system in which a *mobile telephone contains means for determining its exact geographic location . . .*”); *see also* Ex. 44, Information Disclosure Statement, 35,916 Reissue Patent (noting that prior art references taught against “the use of a GPS or other type of satellite

¹¹ Long Range Navigation (LORAN) uses land-based radio transmitters (as opposed to satellite transmitters in GPS) to transmit signals to the mobile unit, which receives the signals and translates those signals into a position in longitude and latitude. *See* LORAN-C User’s Handbook, Pls.’ Exhibit F (explaining that LORAN includes land-based stations, which transmit radio pulses at set time intervals. The receiver, which is located in the mobile unit, receives the LORAN signals, measures the difference in the time it takes for the pulsed signals to reach the receiver, and converts these into useful positional information).

positioning *transceiver in a mobile vehicle* or unit due to its cost and complexity.”)). The prosecution history provides evidence as to how the PTO understood the patent, consistent with how the applicants understood the invention. *See Phillips*, 415 F.3d at 1317.

As the intrinsic evidence makes clear, when the applicants filed their application for the ’633 Patent in 1991, their invention relied on the cell phone calculating its geographic location autonomously using a receiver located in the cell phone. In fact, the applicants describe the conception of the invention as involving GPS receivers in cell phones for position determination:

On October 31, 1991, Mr. Dennison was on the top of a hill overlooking the East Liverpool area trying to devise a way to solve the roaming charge problems. It dawned on him that if the *phones had GPS receivers*, they could send that information to the switch.

(Ex. 15, Pls.’ Am. Resp. to Defs.’ Interrog. No. 1 (emphasis added)).

Plaintiffs do not appear to dispute that the specifications of the Asserted Patents describe using the circuitry in the cell phone to calculate its position in latitude and longitude. Nor can they, as the intrinsic evidence makes clear that the cell phone receives either satellite or land-based radio signals and uses that information to calculate its position. Instead, Plaintiffs incorrectly assert that MetroPCS’ proposed constructions exclude disclosed embodiments, such as LORAN, which include circuitry and elements external to the cell phone. Plaintiffs’ argument, however, misses the mark, as MetroPCS’ proposed constructions expressly include both GPS and LORAN positioning systems. GPS and LORAN positioning systems must include elements and components external to the cell phone, and MetroPCS’ proposed constructions do not exclude these elements; rather, MetroPCS’ proposed constructions articulate what the intrinsic evidence makes clear—that the *calculation* of the cell phone’s position in longitude and latitude is performed in the cell phone.

Plaintiffs provide no construction for these terms, instead arguing that the “ordinary meanings” of these terms apply. First, the “ordinary meanings” of these terms are not “readily apparent,” as they are technical in nature, and thus, this Court should construe these terms in the context of the patent. *See Phillips*, 415 F.3d at 1313. Second, Plaintiffs do not wish to construe these terms because they seek to include material beyond the scope of the invention, specifically a position determining entity. As part of complying with the FCC-mandated regulations related to providing enhanced 9-1-1 services, wireless carriers use PDEs to perform the necessary geographic-location determination. The PDE calculates the cell phone’s precise geographic location through a series of complex data exchanges with the cell phone. Using a PDE in the network to calculate the cell phone’s geographic location, however, incorporates components and communications not disclosed, anticipated or enabled in the Asserted Patents. Indeed, the company SnapTrack was formed in 1995 to develop the position determining entity for E911 applications. Moreover, Snaptrack has a series of patents specifically covering this technology.

Allowing the Plaintiffs to expand the scope of the claims to cover more than what the applicants invented or described would contravene the Patent Act, which affords patent protection only for that material which is both described and enabled by the patent specification. *See* 35 U.S.C § 112. Here, the Asserted Patents should be construed in context with their disclosures—the mobile unit autonomously calculating its position. *See Nat’l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1195-96 (Fed. Cir. 1999) (“The scope of the claims must be less than or equal to the scope of the enablement” to “ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.”). If this Court construes these terms broadly to permit the network, for example, to calculate the latitude and longitude of the mobile unit, the claim terms will be

inconsistent with the scope of the invention and would cover virtually any means for calculating the position of the cell phone in latitude and longitude. Such a construction would be improper as it goes well beyond the scope of the patents and is entirely unsupported by the intrinsic evidence.

If Plaintiffs want to argue that certain positioning systems are equivalent to those that calculate location in the cell phone, they can do so at the appropriate time and subject to the appropriate procedures. However, such an argument should not prevent the Court from construing the claim terms here consistent with the patents' disclosures.

C. "Service Provider"

Claim Term	Defendants' Construction	Plaintiff's Construction
service provider ('404 Patent, Claim 9)	provider of wireless communications service (<i>i.e.</i> wireless carrier)	The ordinary meaning of the phrase is clear and unambiguous. Thus, the phrase does not require construction.

The parties disagree as to the meaning of the term "service provider" in Claim 9 of the '404 Patent. Instead of proposing a construction for this term, Plaintiffs suggest that the ordinary meaning of the phrase is clear, and in doing so seek to broaden the claims beyond any rational scope of the invention disclosed in the specification. The claim language and specification, however, make clear that a "service provider" is a provider of **wireless communication** services (*i.e.*, a wireless carrier).

As set forth in the preamble, Claim 9 is directed to a **wireless communications** system. (Ex. 2, '404 Patent, at 17:27-29). Claim 9 also recites an "MTSO (Mobile Telephone Switching Office)" and "CMR (cellular mobile radio) system" – terms that have meaning only in the wireless communications industry. (*Id.* at 17:29, 17:35-36). One of skill in the art of wireless communications systems would understand that the ordinary meaning of "service provider" in

this context is a provider of wireless communication service (*i.e.*, a wireless carrier such as Centennial, MetroPCS, AT&T Mobility, or Sprint). The specification uses the term “wireless” more than 100 times in the specification of the ’404 Patent, and the patent applicants indicated in the Summary of the Invention that “the invention” is directed to wireless service.¹² (*See* Ex. 2, ’404 Patent, 8:56-61). Even the title of the ’404 Patent – “Cellular Telephone System That Uses Position Of A Mobile Unit To Make Call Management Decisions” – makes clear that it is directed to wireless communications. (*See* Ex. 2, ’404 Patent).

Although the term “service provider” does not appear in the 1991 Application, the specification of the ’404 Patent confirms the ordinary meaning of the term, as it is used in the wireless telecommunications industry, as a provider of wireless communications service (*i.e.*, a wireless carrier).¹³ Thirty times throughout the specification of the ’404 Patent, the term “service provider” is used without a modifier to refer to providers of wireless communication service – *i.e.*, wireless carriers that operate cell sites, antennas, and/or other network equipment to provide wireless communications service.¹⁴ Some examples from the ’404 Patent include:

- 4:57-59 - **Cell sites** are very expensive to install and maintain, so there is a very real savings for a **service provider** if fewer **cell sites** could be constructed while also improving coverage.
- 8:56-61 - By knowing the exact geographic location of a mobile unit during a communication process, competing **service providers** can locate **their cell sites**

¹² The Federal Circuit has made clear that the “Summary of the Invention” is often the most compelling evidence of the meaning of a disputed term, especially when that term is couched as being part of “the invention.” *See, e.g., Verizon Servs. Corp v. Vonage Holding Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007); *Honeywell Int’l Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318-19 (Fed. Cir. 2006).

¹³ Although Plaintiffs try to find support for the term “service provider” in the ’633 Patent, the passages they cite are inapposite. (*See* Ex. 2, ’404 Patent at 6:54-56 (“The mobile locating features of the system could also be important in other contexts such as emergencies or the like.”); Fig. 11A (indicating a sequence of steps performed by a wireless carrier and mobile phone when a call is placed)). Neither of these passages use the term “service provider,” much less indicate that it is anything other than a wireless carrier.

¹⁴ *See* Ex. 2, ’404 Patent at 2:49-54, 3:50-57, 4:26-45, 4:57-67, 5:4-17, 6:1-6:5, 6:6-15, 8:56-61, 10:5-11, 11:36-50, 13:61-14:8, 14:60-67, 15:1-4, 15:10-14, 15:22-28, 15:34-38, and 16:17-27.

anywhere where the wireless reception will allow them to provide the **best wireless coverage** of their territory.

- 16:17-27 - This could be an important competitive advantage to a **service provider** that **owned the 900 MHz in one area** and the **2000 MHz rights in a second area**. For example, FIG. 16 shows **service provider A**, which owns the **license** to 2000 MHz in territory 1, the 900 MHz **license** in territory 2 and the 2000 MHz license in territory 3. When mobile unit CDX travels on roadway XR, it will pass through all through all three territories. The **service provider** would like to handle all the billing revenue for its subscribers travelling through territory 2, but does not have the **2000 MHz license** in that area.

(Ex. 2, '404 Patent (emphasis added)). Such companies that “install and maintain” cell sites and “own licenses” to wireless frequencies to provide “wireless coverage” are commonly referred to as wireless carriers. In fact, the specification of the '404 Patent uses the terms “carrier” and “service provider” interchangeably to refer to providers of wireless service. (See Ex. 2, '404 Patent, at 5:21-24, referring to carriers X and Y; *id.* at 6:6-12, referring to service providers X and Y, with respective service territories depicted in Figs. 3 and 5A).

Not once is the unmodified term “service provider” used in the specification to clearly indicate anything other than a provider of wireless communications service.¹⁵ Plaintiffs focus on the two instances in the specification where the term “service provider” includes a modifier and argue that the term “service provider” without a modifier should be construed more broadly. Neither of these instances, however, suggest that the term “service provider” means anything other than a provider of wireless service. In the first instance, the '404 Patent states, “It is another object of the present invention to provide a wireless over-the-air communications system that can efficiently work with **emergency** service providers.” (Ex. 2, '404 Patent, at 8:25-27,

¹⁵ In a related case, Plaintiffs have argued that a single statement in the '404 Patent indicates that the patent applicants used the term “service provider” to refer to something other than a wireless carrier: “The system using the invention disclosed herein . . . may use many levels of mapping such as cell site selection, . . . and mapping of E-911 calls to an appropriate service provider.” (Pls.’ Resp. Claim Construction Br., 4:08-CV-822-JRA (D.I. 127 at 20) (citing Ex. 2, '404 Patent, 10:7-11)). Such “mapping,” however, appears to relate to the mapping of a “communications provider” (or wireless carrier) as identified in block 410 of Figure 9B. When a mobile unit is near a wireless service boundary, the E-911 call is thus mapped to the appropriate wireless service provider. See Figs. 5A, 13. This statement is thus wholly consistent with Defendants’ construction.

emphasis added). That passage states that the “wireless over-the-air communications system” works *with* the emergency service provider. Or stated another way, emergency service providers are *not* part of the “wireless over-the-air communications system” recited in Claim 9. In contrast, the service providers referenced in Claim 9 of the ’404 Patent are ***included in*** the wireless over-the-air communication system, as is explicitly recited in the preamble of Claim 9. In the second instance, the specification expressly refers to a “wireless service provider.” This passage alleges that “there is a need to permit a wireless over-the-air communication system to change ***frequencies*** as the mobile unit moves whereby a single **wireless service provider** can provide service to its subscribers regardless of ***frequency***.” (Ex. 2, ’404 Patent at 6:24-26). (emphases added). The patent applicants described how their patent allegedly met this need in Column 16, Lines 17-32, in which the patent applicants repeatedly used the term “service provider” to refer to a provider of wireless service. (Ex. 2, ’404 Patent at 16:17-32). The very passage relied upon by Plaintiffs thus further demonstrates that the patent applicants used the term “wireless service provider” interchangeably with “service provider.”

Plaintiffs offer no construction for the term, instead stating that the ordinary meaning of the phrase is clear and unambiguous. But there are at least ***seventeen*** definitions for the term “service.” (See Ex. 21, THE AMERICAN HERITAGE DICTIONARY, at 1121). According to the AMERICAN HERITAGE DICTIONARY, the disparate meanings for service can include, for example, religious ceremony, armed forces, delivering a legal summons, or even a set of dishes. (*Id.*). The ordinary meaning of the term must be considered in context for it to make sense as it is used in the Asserted Patents. Accordingly, one of skill in the art would not interpret the term “service providers” in Claim 9 to include providers of all types of services such as utility companies, medical professionals, internet service providers, or state and local emergency responders.

Rather, having read Claim 9 itself, along with the specification of the '404 Patent, one of skill in the art would understand that the unmodified term “service provider” is a provider of wireless communications service (*i.e.*, a wireless carrier). (*Id.*).

D. “Override Criteria”

Claim Term	Defendants’ Construction	Plaintiffs’ Construction
override criteria (’404 Patent, Claim 9)	two or more rules that alter the operation of the system based on the exact geographic location of the mobile unit	A preemptive rule for deciding, updating or adjusting something

The parties disagree as to whether the term “override criteria” must be “based on the exact geographic location of the mobile unit,” consistent with the clear purpose of the invention, and whether the word “criteria” is singular or plural.¹⁶

1. Override Criteria Must Be Based on the Exact Geographic Location

If the phrase “exact geographic location” is not included in the construction of the term “override criteria,” as Plaintiffs propose, Claim 9 of the ’404 Patent makes no use of the “exact geographic location.” Claim 9 reads:

A method of making communication process management decisions in a wireless over-the-air communications system having a plurality of service providers and an MTSO comprising:

- A) establishing an exact geographic location for a mobile unit;
- B) establishing override criteria from a group consisting of billing, taxing, CP (communications process) rating, service requested by a user of a mobile unit and CMR (cellular mobile radio) system; and
- C) directing the communication process to a specific service provider associated with the service requested by the user of the mobile unit

¹⁶ Defendants acknowledge that the term “exact geographic location” is ambiguous and renders this claim indefinite. Nevertheless, as discussed in Section A *infra*, if the Court finds that the term can be construed, any construction of the term “override criteria” must include the Court’s construction of the term “exact geographic location.”

based on the override criteria without further input from the user of the mobile unit.

Element (a) Claim 9 requires “establishing an exact geographic location for a mobile unit.” Subsequent steps in the claim, however, make no reference to that exact geographic location. In light of the stated purpose of the patent to “use [the] position of a mobile unit to make call management decisions,” as well as the entire disclosure in the specification, the term “override criteria” should thus be construed to rely upon the “exact geographic location” established in the previous step of the method claim. (Ex. 2, ’404 Patent, Title). Otherwise, the first step of Claim 9 is rendered superfluous and the stated purpose of the patent cannot be achieved.

The prosecution history makes clear that the patent applicants intended to claim “override criteria” that rely upon the “exact geographic location.” During prosecution of the application for the ’404 Patent, the patent applicants successfully argued that the claims were allowable because the call management decisions were based on the exact geographic location of the mobile unit. Among other things, the applicants distinguished a group of cited references from the claims because those references did not disclose “a cellular system in which call management decisions are *based on the location of a mobile unit rather than signal strength*.” (Ex. 12, March 21, 1996, Information Disclosure Statement, at 4 (emphasis added)). Similarly, to overcome the Examiner’s rejection of the claims as obvious in view of Japanese Patent 2-210923 to Okamoto (“*Okamoto*”) and U.S. Patent No. 5,303,297 to Hillis (“*Hillis*”), the applicants argued:

[A]pplicants have devised a call management system that makes call management decisions *based on the exact geographic location of the mobile unit*. These call management decisions include determining billing rates, taxes, CP rating customer service requested and CMR system selection. Each of these decisions is made by the system and the call is automatically completed or continued in the most efficient and accurate manner without requiring any input from the user

(Ex. 11, August 18, 1999, Amendment, at 12 (emphasis added)). The applicants also distinguished their claims from *Hillis* by stating that “the Hillis system does not select service providers ***based on the location of the mobile unit***” and that “the Hillis patent has no teaching of making call management decisions exclusive of signal strength.” (*Id.*) (emphasis added). However, although the first step of Claim 9 requires “establishing an exact geographic location for a mobile unit,” there is nothing in the language of Claim 9 that explicitly links that step with anything else in the claim or that otherwise correlates the geographic location of the mobile unit to call management decisions or that excludes signal strength as argued by the applicants. Rather, the only “decision” recited in Claim 9 is “directing the communication process . . . based on the override criteria.” Accordingly, the applicants’ arguments to the Patent Office have meaning only if the override criteria are based on the exact geographic location of the mobile unit.

2. “Criteria” Is the Plural Form of “Criterion”

The parties also disagree as to whether the term “criteria” is singular or plural. One of skill in the art would understand that “criteria” is the plural form of “criterion,” and therefore must include two or more. Plaintiffs apparently disagree. “Criteria” is the plural form of the noun “criterion.” (Ex. 21, AMERICAN HERITAGE DICTIONARY, at 341). The specification uses the term “criteria” as plural (*e.g.*, “there is need for a wireless over-the-air communication system that can account for special circumstances associated with a communication process, and alter the system response when the mobile unit meets the ***criteria*** for those circumstances, even if the communication process is already in progress when the ***criteria are*** met.” (Ex. 2, ’404 Patent, at 7:11-17 (emphasis added)). One of skill in the art would understand that “criteria” is

the plural form of “criterion” and therefore must include two or more.¹⁷ Plaintiffs apparently disagree.¹⁸

Plaintiffs propose a definition of the word “criteria” by combining conflicting definitions from two different dictionaries.¹⁹ (D.I. 130 at 19-20). They first cite the definition of “criterion” from the 1982 American Heritage Dictionary, which specifically states that “[c]riteria is a plural form only [and] should not be substituted for the singular criterion.” (*Id.* at 341). This same statement appears almost verbatim in the 1994 dictionary that was also cited by Plaintiffs.²⁰ However, despite *two* of Plaintiffs’ dictionaries clearly stating that the term “criteria” is plural, Plaintiffs attempt to argue for a different “ordinary meaning” of criteria by relying on a 2010 Online Dictionary that contradicts both their 1982 and 1994 dictionaries. Not only is the 2010 Online Dictionary dated many years after the 1996 filing date of the ’404 Patent, making the 2010 Online Dictionary improper evidence for claim construction (*see Phillips*, 415 F.3d at 1313; *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2003)),

¹⁷ The ’404 Patent and Claim 9 itself confirm this understanding. Claim 9 lists five possible criteria – billing, taxing, CP rating, service requested by a user of a mobile unit, and CMR system – and the ’404 Patent provides an example where two of these criteria are used simultaneously. (Ex. 2, ’404 Patent at 15:54-63 (emphasis added)). Thus, the ordinary meaning of “criteria” as the plural form of criterion is supported by the ’404 Patent.

¹⁸ Plaintiffs also argue that the term “override criteria” appears in a Markush group, and that by virtue of that format, it cannot be plural. Plaintiffs are wrong. Regardless of whether Claim 9 is properly written to include a “Markush group,” there are many valid U.S. patents that require multiple elements to be selected from a group. As one example, Claim 1 of U.S. Patent No. 6,777,231 recites “two or more of the group consisting of a bone cell, a cartilage cell, a nerve cell, or a muscle cell.” *See Univ. of Pittsburgh v. Hedrick*, 573 F.3d 1290, 1295 (Fed. Cir. 2009). Accordingly, Plaintiffs’ emphasis on the alleged Markush format of Claim 9 of the ’404 Patent is merely a diversionary tactic and provides no support for Plaintiffs’ strained assertion that the term “criteria” is singular.

¹⁹ Plaintiffs also argue that “criteria” should be considered singular because the Examiner used the word that way once during prosecution. (D.I. 130 at 21). But statements by an examiner are less relevant to claim construction than statements by applicants, and much less relevant than statements in the specification of the Asserted Patents themselves. *See Phillips*, 415 F.3d 1303 (“the specification is the single best guide to the meaning of a disputed term”) (internal quotations omitted); *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1155 (Fed. Cir. 1997) (“[A] single remark is not sufficient to justify importing a qualification into the plain language of the claim, especially since the remark was not in a statement made by the applicants, but rather appeared in the examiner’s characterization of the applicants’ claimed invention.”). The applicants’ statements, which contradict Plaintiffs’ position, should control.

²⁰ “Criteria is a plural form and should not be substituted for the singular form criterion.” (Ex. 22, WEBSTER’S II NEW RIVERSIDE UNIVERSITY DICTIONARY 328 (1994)).

but Plaintiffs' inappropriate combination of dictionaries is an improper manipulation of the claim construction process.

One of skill in the art, having read the '404 Patent and statements made by the applicants during prosecution, would understand that, as used in Claim 9 of the '404 Patent, the term "override criteria" means two or more rules that alter the operation of the system based on the exact geographic location of the mobile unit."

E. "Subsequent Services"

Claim Term	Defendants' Construction	Plaintiff's Construction
subsequent services ('822 Patent, Claims 21, 34, 37)	subscriber services occurring after the communication process between the network and the specific mobile unit has ended	<p>In JCCPS: a service that obtains the recorded exact geographic location and mobile unit identification after completion of the communication process that recorded them.</p> <p>In Opening Brief: a service occurring during a call in progress, including emergency 911, taxes, communication process rating, message unit, customer service frequency selection, changing frequencies, changing cell site (handover) and changing cell system.</p>

The dispute between the parties' proposed constructions of this term centers on whether the subsequent services occur during or subsequent to a call and whether or not the services are those provided to wireless subscribers. In their Opening Claim Construction Brief, Plaintiffs set forth an entirely new claim construction for the term "subsequent services," arguing that this change was made "to more accurately reflect the term's meaning based on the intrinsic record and to otherwise resolve any potential ambiguity caused by terminology used previously." (D.I.

130 at 12). Plaintiffs’ newly proposed claim construction for “subsequent services” is improper, however, not only for its timing, but also for its rationale.²¹

1. Plaintiffs’ New Construction is Contrary to Common Sense and Contrary to Plaintiffs’ Previous Construction

Plaintiffs argue that subsequent services are “services that are provided *during* a call in progress.” The plain meaning of the word “subsequent” is “following in time or order; succeeding,”²² but Plaintiffs’ construction *excludes* services provided after the call has ended while *including* services that occur during the call. According to Plaintiffs’ new construction, any service that follows after the call would not be within the scope of this claim term because it would not be “during the call.” This is nonsensical. “Subsequent services” is not a term of art and is neither used nor defined in the specification. Therefore there is no reason that a person of skill in the art would interpret the term to be in direct contradiction to its ordinary meaning. *See White v. Dunbar*, 119 U.S. 47, 52 (1886) (“[I]t is unjust to the public, as well as an invasion of the law, to construe [a claim] in a manner different from the plain import of its terms.”), *quoted in Phillips v. AWH Corp.*, 415 F.2d at 1312.

Plaintiffs’ new construction is also at odds with Plaintiffs’ previous construction. According to Plaintiffs’ previous construction, subsequent services are those services that occur “after completion of the communication process,” which would cover services provided *subsequent* to the call. Plaintiffs new construction excludes those same services and highlights Plaintiffs’ flawed approach to claim construction.

²¹ Plaintiffs’ change in position comes four months after serving their Preliminary Claim Constructions, and three months after the Examiner at the Patent Office made the statement upon which Plaintiffs’ construction is based. Plaintiffs have made no attempt to explain this delay or to justify their failure to provide Defendants or the Court with any notice of this reversal. Plaintiffs’ tardy change in position is particularly troubling in light of the fact that Plaintiffs have been litigating (and presumably studying) the Asserted Patents for years.

²² (Ex. 21, THE AMERICAN HERITAGE DICTIONARY, at 1213).

2. In View of the Different Standards, the Court Should Not Give any Weight to the Examiner's Statements During Reexamination

Plaintiffs' new construction is improperly lifted from an Examiner's preliminary statement during ongoing reexamination proceedings for the '822 Patent. First, because the reexamination proceedings are ongoing, relying on the Examiner's preliminary interpretation of the term, when that interpretation is likely to further change, is improper.²³ Second, a patent examiner is bound by a different claim interpretation standard than are the courts. Whereas examiners are required to apply the "*broadest reasonable interpretation*" to claim terms during examination, (see Manual of Patent Examining Procedure, Section 2111; *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004), courts define a claim term according to "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips*, 415 F.3d at 1313.²⁴ Indeed, the Examiner expressly acknowledged in the reexamination proceedings that the standards are different, and hence the interpretations may be different. (Ex. 13, March 16, 2010 Reexamination Office Action, at 13). Finally, the Examiner interpreted "subsequent services" in an effort to determine whether the '822 Patent is entitled to priority to the 1991 Application (*id.* at 8-9), and the Examiner expressly limited his interpretation of the term "for the purposes of this proceeding." (*Id.* at 11).²⁵ This Court should give no weight to the Examiner's preliminary interpretation of the term. See *In re Am. Academy*

²³ The reexamination proceeding is not concluded until one of three events occur: (1) the Patent Office issues a reexamination certificate; (2) the Patent Office officially terminates the reexamination proceeding without issuing a reexamination certification; or (3) the Patent Office merges the reexamination proceeding with a reissue proceeding. Manual of Patent Examining Procedure, at § 2694.

²⁴ "Everyone seems to have accepted this dichotomy—that a different claim interpretation methodology should be used in examination than that which is used in enforcement actions." (Ex. 28, Bey et al., *The Unreasonableness of the Patent Office's Broadest Reasonable Interpretation Standard*, 37 AIPLA Q.J. 285, 288 (2009) (explaining how, under current law, the Patent Office and district courts apply different standards for claim construction resulting in two sets of claim definitions)).

²⁵ Notably, the Examiner determined that the claims of the '822 Patent at issue were *not* entitled to priority to the 1991 Application. (Ex. 13, March 16, 2010 Reexamination Office Action, at 12-13).

of Science Tech. Ctr., 367 F.3d 1359, (Fed. Cir. 2004); *Ethicon v. Quigg*, 849 F.2d 1422 (Fed. Cir. 1988); *In re Yamamoto*, 740 F.2d 1569 (Fed. Cir. 1984).

The Federal Circuit has held that applying the wrong claim construction standard is reversible error. *See, e.g., In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989); *see also SRAM Corp. v. AD-II Eng., Inc.*, 465 F.3d 1351, 1359 (Fed. Cir. 2006). It would be reversible error to apply the Examiner's broadest reasonable interpretation standard in litigation.

3. Defendants' Construction Is the Only Interpretation Fully Supported by the Specification

In contrast to Plaintiffs' proposed construction, which relies on the Examiner's statement and is divorced from the specification, Defendants' construction is fully supported and informed by the specification of the '822 Patent.²⁶ The specification describes a call that begins with initiation and registration and continues until that call is completed. (Ex. 3, '822 Patent at 12:4-13:55). The entire call is outlined in the flow chart in Figs. 8, 9, and 9B of the '822 Patent.

²⁶ Examiner statements in prosecution that are inconsistent with the written description should be disregarded. *Honeywell Int'l, Inc.*, 452 F.2d at 1318-19 ("In any event, such a broad and vague statement [by the Examiner] cannot contradict the clear statements in the specification describing the invention more narrowly.")

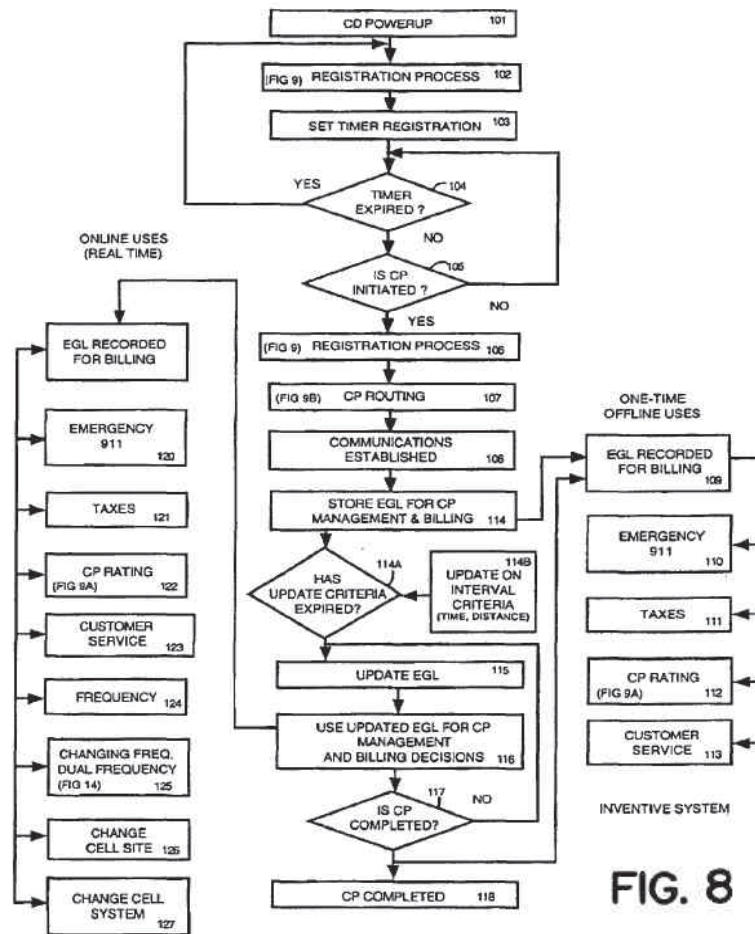


FIG. 8

As illustrated in Figure 8, there are two broad categories of potential uses for data recorded during a communication process: “online uses (real time)” and “one-time offline uses.” (*See* Ex. 3, ’822 Patent, Fig. 8, left and right sides, respectively). As shown on the left and right sides of Figure 8 and described in the specification, the online uses (left side) occur during the call; and it is only the “one-time offline uses” (right side) that are provided subsequent to the call. (Ex. 3, ’822 patent at 13:54-59). The term “subsequent services” is *not* in the specification. The closest language is “post communication process subscriber service,” which appears in reference to block 113 (“customer service”) on the right side of Figure 8. Significantly, all of the services identified on the right side of Figure 8 are provided to a subscriber. Accordingly, one of skill in the art would understand that the term “subsequent services” means subscriber services (*i.e.*,

services provided to the wireless service provider's customers) occurring after the communication process between the network and the specific mobile unit has ended.

4. Patent Applicants Are Forbidden from Defining Claims through Prosecution History Alone

As they have done with other terms (*see, e.g.*, “service provider” discussed *supra*), Plaintiffs ignore the context provided by the patent and assert a generic construction in which *any* service following completion of a communication process would be a “subsequent service.” However, for the reasons stated above, one of skill in the art having read the ’822 Patent would understand that the term “subsequent services” is properly limited to services provided to a subscriber or caller. In fact, Plaintiffs have consistently acknowledged in their Opening Brief, in arguments to Judge Economus, and in their expert declaration submitted in that the Northern District of Ohio case that “subsequent services” are services provided to subscribers. (*See* D.I. 130 at 2 (“services such as taxing, billing, and emergency assistance could be provided based on a *subscriber’s* location”) (emphasis added); Ex. 16, Pls.’ Opening Claim Construction Br., 4:08-CV-816, D.I. 34 at 8). As Plaintiffs’ own concessions make clear, the claims are correctly construed to require that the subsequent services be provided to the subscriber. Therefore, the construction of the term “subsequent services” should clarify that the claimed services are provided to subscribers.

Plaintiffs’ construction is based on an Examiner’s statements on December 22, 2009 in a reexamination proceeding for the ’822 Patent. (Pls.’ Br. at 12-14 (D.I. 130)). Defendants acknowledge that a patent applicant may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a special definition of the term in

the specification.²⁷ However, *Plaintiffs are improperly incorporating statements from the prosecution history*. The Federal Circuit requires that any special definitions assigned to a term “must be sufficiently clear *in the specification* that any departure from common usage would be so understood by a person of experience in the field of invention.”²⁸ Furthermore, the purpose of consulting the prosecution history in construing a claim is to exclude any claim scope that was disclaimed by the applicants. *Phillips*, 415 F.3d at 1317. Statements made during prosecution cannot broaden the scope of the claims. *Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1140 (Fed. Cir. 2003).

As the Examiner acknowledged, “the word ‘subsequent’ does not exist in the instant Patent specification nor those of the parent Patents.” (Ex. 13, March 16, 2010 Reexamination Office Action, at 9). Thus, the patent applicants did not provide any special definition of “subsequent services” in the specification, and this Court should not allow Plaintiffs to circumvent Federal Circuit precedent and Patent Office procedures by incorporating statements from the prosecution history made after the date of the invention and after the specification was fixed.

F. “Location-Based Service”

Claim Term	Defendants’ Construction	Plaintiff’s Construction
location-based service (’763 Patent, Claims 23, 32)	wireless communications service provided based, at least in part, on the location of the mobile unit	a service providing information based, at least in part, on the location of the mobile unit

²⁷ See, e.g., *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (quoting *Intellicall, Inc. v. Photometrics, Inc.* 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)).

²⁸ *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998) (emphasis added), cited by *Phillips*, 415 F.3d at 1313; see also *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1370 (Fed. Cir. 2005) (“When a patentee acts as his own lexicographer in redefining the meaning of particular claim terms away from their ordinary meaning, he must clearly express that intent *in the written description*.”) (emphasis added).

Although the parties agree that to be “location-based,” the claimed service must be “based on” or “based, at least in part, on” the location of the mobile unit, Plaintiffs contend that the “service” itself could include any service that merely provides information. Just as it does for the term “service provider,” however, the specification makes clear that the proper scope of the claimed “service” is wireless communications service. Plaintiffs’ construction unduly broadens the scope of the claims beyond the disclosure of the ’763 Patent, in which the term appears. Such inconsistency between the specification and a claim’s construction cannot be tolerated. *See Apple Computer, Inc. v. Articulate Sys., Inc.*, 234 F.3d 14, 25 (Fed. Cir. 2000) (“[T]he claim must be interpreted in light of the teaching of the written description and purpose of the invention described therein.”).

1. Defendants’ Construction is Consistent with the Intrinsic Evidence

As with the term “service provider,” the claim language and specification make clear that asserted independent Claim 23 of the ’763 Patent is directed to a wireless communications system.²⁹ Unlike the term “service provider,” however, the term “location-based service” appears nowhere in the specification of the ’763 Patent or the 1991 Application. Rather, this term was added by amendment, in which the applicants noted that “[n]ewly added claims 23-40 find support in the specification as follows: Claim 23, at least at paragraphs 6, 7, 51-53, 79, 80, 97 and Figures 1, 2, 6, 7, 8, 9, 9A, 9B.” (Ex. 41, May 16, 2007 Amendment, at 9). These passages use the term “service” eleven times – each time to refer to wireless communications service, including handoffs between cell sites during a call. These statements are reinforced by the totality of the ’763 Patent, including the first lines of the Field of Invention, Background of the Invention, Summary of the Invention, and Detailed Description of Specific Embodiment,

²⁹ (See Ex. 4, ’763 Patent, Claim 23 (claiming a “cellular communication system”), 1:48-52 (“the term ‘cellular telephone system’ or its equivalents is intended to be shorthand notation for the term ‘wireless over-the-air communications system’)).

which all recite a wireless system. One of ordinary skill in the art would clearly understand that the service contemplated by the term “location-based service” is wireless communications service.

2. Plaintiffs’ Construction Improperly Broadens the Scope of the Claims Beyond the Applicants’ Invention

Plaintiffs’ construction, on the other hand, is divorced from the specification and based on a self-serving statement made by the applicants after the Examiner had completed the original examination of the application and determined that the claims were allowable. (*See* D.I. 130 at 16, quoting a statement made by the applicants in response to the Examiner’s allowance). Prosecution history is consulted during claim construction to exclude any claim scope that was disclaimed by the applicants, *Phillips*, 415 F.3d at 1317, not to broaden the claims. *Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1140 (Fed. Cir. 2003). As the Federal Circuit observed, “[a]n inventor’s self-serving statements are rarely relevant to the proper construction of a claim term.” *O2 Micro*, 521 F.3d at 1362 n.3. As the statement Plaintiffs rely upon was made *after* the Examiner had allowed the claims, there is no evidence that the Examiner even considered the statement during prosecution, making this particular self-serving statement irrelevant. Thus, Plaintiffs’ reliance on the applicants’ self-serving statement is improper.

As a result of their reliance on improper evidence, Plaintiffs’ construction, “a service providing information based, at least in part, on the location of the mobile unit,” would broadly cover systems and concepts far beyond anything described in the ’763 Patent, which is directed to an alleged improvement for wireless communications systems. Any construction that broadens the scope of the patent, beyond any actual invention, to cover services that merely provide information would be unsupported and improper. *See Renishaw v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (“Ultimately, the interpretation to be given a term

can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.”). Because Plaintiffs’ construction broadens the scope of the ’763 Patent to cover services not contemplated in the patent, it is improper and should be rejected.

G. “Triangulation”

Claim Term	Defendants’ Construction	Plaintiffs’ Construction
triangulation (’763 Patent, Claims 29, 30, 31)	a method of calculating the location of an object by determining the angles from the object to two points having known locations	a method of calculating an unknown point, used by position determining systems such as LORAN, by forming a triangle having the unknown point and two known points as the vertices

The parties agree that triangulation is a method of calculating the location of an object or point using the locations of two known points. The parties dispute whether the term “triangulation” in the claims of the ’763 Patent requires angle determinations and whether the techniques used in LORAN would fall within the scope of the term.

1. The Number of “Known Locations” Required to Calculate a Location Varies between Different Positioning Systems

There are numerous techniques that can be used to determine the location of an unknown point or object using calculations based on other points or objects of known locations. (*See* Ex. 20, Technology Summary Chart). GPS uses distance calculations from four or more satellites to calculate a 3-D location (*e.g.*, latitude, longitude, and elevation) of an unknown GPS receiver. (*See* Ex. 34, E. Kaplan, *Understanding GPS: Principles and Applications* (Artech House) (1996)). Three satellites may be sufficient to calculate a 2-D location if elevation is not required. (*Id.*). Similarly, LORAN is a system that requires a minimum of three transmitters to determine a 2-D location of an unknown receiver. (Ex. 24, LORAN-C User Handbook, Dep’t of Transp.,

May 1980). On the other hand, ships navigating at sea can triangulate their 2-D position by determining the bearings (*i.e.*, angles) from their ship to two beacons of known location. (Ex. 29, N. Bowditch, *American Practical Navigator, Volume I*, 1299 (Defense Mapping Agency Hydrographic Center (1977))). Unless there is an additional source of information, positioning systems cannot provide a 2-D location (such as latitude and longitude) using only two known locations without calculating at least one angle.

2. Plaintiffs' Construction Is Internally Inconsistent

Because LORAN systems cannot determine a 2-D location using only two transmitters, Plaintiffs' proposed construction is fundamentally flawed. Plaintiffs' construction implies that LORAN is capable of locating an unknown receiver using the known locations of only two transmitters. This is simply not true. LORAN requires a minimum of three known points to determine the position of a single unknown point.³⁰ Triangulation, in contrast, requires only two known points. Accordingly, at least the portion of Plaintiffs' construction relating to LORAN is inconsistent with the rest of Plaintiffs' construction.

3. The '763 Patent Distinguishes between LORAN and Triangulation

The specification of the '763 Patent treats LORAN and triangulation as separate techniques for determining location. "The first step in the registration process, block 102 is to determine the exact geographic location, block 201 of the communications device via either GPS, block 202, signal strength, block 203, **Loran**, block 204, **triangulation** or other similar location means." (Ex. 4, '763 Patent, at 11:34-39). Any construction of triangulation that blurs the lines between these distinct methods cannot be the proper construction. Indeed, the patent

³⁰ Plaintiffs previously cited to authority acknowledging that LORAN requires a minimum of three known points to determine the position of a single unknown point, arguing in related litigation that "the basic Loran-C system consists of a chain of three or more land-based transmitting stations." (Ex. 42, Exhibit 12 to Pls.' Resp. to Defs.' Opening Claim Construction Br., Loran-C User Handbook, 4:08-cv-816, D.I. 34-12 at 7). Triangulation, in contrast, uses only two known points, and Plaintiffs' construction acknowledges this.

applicants' differentiation in the '763 Patent specification between LORAN and triangulation is tantamount to an admission that Plaintiffs' construction of triangulation must be wrong.

4. Triangulation Requires Angle Determinations

Plaintiffs' construction, which uses the phrase "forming a triangle," is insufficient to identify the technique known as "triangulation." The Navigation Dictionary distinguishes between two well-known position determining systems:

Triangulation - The measurement of a series of angles between points on the surface of the earth, for the purpose of establishing relative positions of the points in surveying. If distances between the points are measured, instead of angles, the process is called TRILATERATION.³¹

(Ex. 25, Navigation Dictionary, H.O. Pub. No. 220, p. 260, U.S. Naval Oceanographic Office, 2d Ed., 1969). Triangulation requires the measurement of angles and a known distance between two of the three vertices of the triangle. (Ex. 29, Bowditch, at 1299). Any definition of triangulation that does not involve an angle determination is technically inaccurate and not proper for use in the field of navigation and positioning. (Ex. 25, NAVIGATION DICTIONARY, at 269). One of skill in the art, having read the specification and the claims, would understand that triangulation is "a method of calculating the location of an object by determining the angles from the object to two points having known locations."

5. Plaintiffs Improperly Rely on a General-Usage Dictionary that Contradicts Art-Specific Evidence

Plaintiffs rely on the WEBSTER'S II NEW RIVERSIDE UNIVERSITY DICTIONARY, a general-usage dictionary, to support their construction of "triangulation." (D.I. 130 at 19).³² However,

³¹ The definition of trilateration is "The measurement of a series of distances between points on the surface of the earth, for the purpose of establishing relative positions of the points in surveying. If angles between the points are measured, instead of distances, the process is called Triangulation." (Ex. 25, NAVIGATION DICTIONARY, at 260).

³² Once again, Plaintiffs have cherry-picked an obscure general-usage dictionary to support their construction of this particular term because other dictionaries relied upon by Plaintiffs for other terms actually support Defendants' proposed construction. For example, the 2010 ONLINE DICTIONARY cited on page 15 of Pls.' Opening Br. defines

this definition is inexact and insufficient to identify the technique known to those skilled in the art as “triangulation.” The Federal Circuit has repeatedly stated that ““a general-usage dictionary cannot overcome art-specific evidence of the meaning’ of a claim term.” *Phillips*, 415 F.3d at 1322 (quoting *Vanderlande Indus. Nederland BV v. Int’l Trade Comm’n*, 366 F.3d 1311, 1321 (Fed. Cir. 2004)). The definition in Plaintiffs’ general-usage dictionary contradicts the meaning of the term to those skilled in the art as demonstrated by numerous technical dictionaries: (1) the NAVIGATION DICTIONARY, published by the U.S. Naval Oceanographic Office in 1969 (Ex. 25 at 260); (2) the *American Practical Navigator*, published by the Defense Mapping Agency Hydrographic Center in 1977 (Ex. 29 at 1299); and (3) the 1987 NORTON ENCYCLOPEDIA DICTIONARY OF NAVIGATION (Ex. 26 at 213). Accordingly, the meaning of “triangulation,” as set forth in Defendants’ construction, should be adopted.

V. CONCLUSION

It is the role of the Court to resolve disputes regarding the scope of the asserted claims to ensure that questions of scope are not left to the jury. The terms proposed for construction above have been identified because their construction is necessary to resolve disputes between the parties. Plaintiffs’ failure to propose constructions for most of these terms amounts to an improper request for the Court to leave issues of law for the jury to decide. And where Plaintiffs have proposed constructions, those constructions are fundamentally flawed for the reasons set forth above. In contrast, Defendants’ constructions are consistent with – and indeed compelled by – the claims as a whole, the descriptions provided in the Asserted Patents and the statements that the applicants made in order to obtain the patents. For these reasons, Defendants respectfully request that the disputed terms be construed in the manner proposed by Defendants.

triangulation as “finding a position or location by means of *bearings* from two fixed points a known distance apart.” (Ex. 23, <http://www.merriam-webster.com/dictionary/triangulation>, emphasis added).

Dated: April 30, 2010

By: /s/ Chris Kennerly

Bryant C. Boren, Jr., Lead Attorney
State of Texas Bar No. 02664100
Email: bryant.c.boren@bakerbotts.com
Chris Kennerly
State of Texas Bar No. 00795077
Email: chris.kennerly@bakerbotts.com
Kevin E. Cadwell
Email: kevin.cadwell@bakerbotts.com
State of Texas Bar No. 24036304
Joshua J. Parker
State of Texas Bar No. 24056092
Email: josh.parker@bakerbotts.com

BAKER BOTTS L.L.P.
620 Hansen Way
Palo Alto, CA 94304
Telephone: 650.739.7500
Facsimile: 650.739.7604

**ATTORNEYS FOR DEFENDANT
CENTENNIAL COMMUNICATIONS
CORP.**

By: /s/ Nicholas Groombridge

Nicholas Groombridge
Lead Attorney
New York State Bar No. 2171346
nicholas.groombridge@weil.com
Danielle Rosenthal
New York State Bar No. 704268
danielle.rosenthal@weil.com
WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, NY 10153
Telephone: (212) 310-8000
Facsimile: (212) 310-8007

T. Ray Guy (TX Bar No. 08648500)
ray.guy@weil.com
Carmen E. Bremer (TX Bar No. 24041009)
carmen.bremer@weil.com
WEIL, GOTSHAL & MANGES LLP
200 Crescent Court, Suite 300
Dallas, TX 75201

Telephone: (214) 746-7700
Facsimile: (214) 746-7777

Harry L. Gilliam, Jr.
gil@gillamsmithlaw.com
State Bar No. 07921800
GILLAM & SMITH, L.L.P.
303 South Washington Avenue
Marshall, Texas 75670
Telephone: (903) 934-8450
Facsimile: (903) 934-9257

Of Counsel:

Garreth A. Sarosi
State Bar No. 24039373
MetroPCS Communications, Inc.
2250 Lakeside Blvd.
Richardson, TX 75082
(469) 330-4784 Telephone
(866) 715-8790 Facsimile
gsarosi@metropcs.com

**ATTORNEYS FOR DEFENDANTS
METROPCS COMMUNICATIONS,
INC. & METROPCS WIRELESS, INC.**

CERTIFICATE OF SERVICE

I certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF System per Local Rule 5.3.

/s/ Joshua Parker